Collider-Accelerator Department

Building 911-A
P.O. Box 5000
Upton, NY 11973-5000
Phone 631 344-7934
Fax 631 344-5676
piper@bnl.gov

managed by Brookhaven Science Associates
for the U.S. Department of Energy

Collider-Accelerator Department
Worker Occupational Safety and Health Committee

Date: March 31, 2004

To: WOSH Committee and Guests

From: P. Sparrow, A. Piper

Subject: Minutes for 3/24/04 - WOSH Committee Meeting

Members: L. Ahrens*, M. Bannon*, J. Beebewang, J. Benante, J. Carlson, R. Conte, J. Cupolo, D. Derryberry, F. Dusek*, J. Guercio, E. Koropsak, J. Laster*, D. Lazarus, C. Liaw, D. Meany*, B. Mullany*, J. Nicolellis*, A. Piper, S. Pontieri, M. Sardzinski, W. Shaffer, T. Shrey*, L. Snydstrup, P. Sparrow, D. Steski, L. Vogt, D. Weiss*, R. Zapasek*.
(* denotes not in attendance)

Guests: E. Lessard, R. Karol

P. Sparrow provided the introduction to this meeting by identifying the proposed agenda and respective speakers.

E. Lessard reviewed the 2004 OSH Objectives and Targets inclusive of:

1. Strategy for performance of Job Risk Analysis for the C-AD JRA bank.
2. Review of a completed JRA example.
3. Review of stressors in the workplace.
4. Review of WOSH committee responsibilities for JRA's.

A. Piper reviewed the following topic:

- Results of the investigation of apparent failure of safety glasses (please see attachment "investigation of safety glasses").

P. Sparrow reviewed the following topic:

- Location of existing WOSH suggestion box for C-AD personnel.

Closing Meeting Comments:

1. As a follow-up to the discussion regarding the investigation of the apparent failure of safety glasses, the following questions were raised;

    - Are safety glasses with polycarbonate lenses available with a tinted lens?
    - Are the required safety glass side shields readily available?

2. As a follow-up to the discussion regarding the WOSH suggestion box, the following requests/questions were voiced;

    - Should the WOSH suggestion box be relocated?
    - A notice should be posted in the C-AD particle post alerting personnel to the purpose and location of the WOSH suggestion box.
    - Could the ESH & Q division provide additional WOSH suggestion boxes in remote buildings (i.e.: 901A, 902, 930)?
    - Could an anonymous e-mail system be set up in addition to the WOSH suggestion box?

3. Several additional items were noted in an e-mail from WOSH committee member F. Dusek (please see attachment “WOSH concerns”).

Copy to:

Hauser, J
Karol, R.
Kirk, T.
Lessard, E.
Lowenstein, D.
McNerney, A.
Passarello, D.
Pile, P
Roser, T
Sandberg, J.
Tuozzolo, J.
WOSH Committee Members

From: Sparrow, Paul J
Sent: Tuesday, March 23, 2004 1:39 PM
To: Karol, Raymond C; Piper, Arthur J; Kobasiuk, Frederick D; Maraviglia, John
Cc: Dusek, Frank M
Subject: WOSH Concerns

I received this from Frank Dusek please respond to any question below if you have the answer and CC me. Thanks

Paul

Sorry I missed the meeting.I was looking forward to the free donuts & coffee. Do have a few questions:

1 Geo Murdock asked about the deliberator that used to be in the Main Control Room, is there one available in CAD?

2 Bill Anderson is responsible for the CAS watch's personal O2 detectors, and queries wouldn't it be more convenient if the Dept took over repair, calibration and battery needs for them as is done i.e. with film badges and dossimetry? Instead of having individual group leaders deal with them.

3 Bill looked into a stalling problem with the natural gas powered vehicles the watch uses. The Motor Pool removed the faulty valves in question and has new parts on order.

4 The CAS watch asked for exhaust fans in the kitchen and bathroom in bldg 940 and he had them installed.

5 Like to thank Artie Piper for looking into my safety glasses concern.

6 Someone from the Mech Serv Group was asking about the availability of the slip on snow cleats that were supposed to be made available...hopefully we won't need them anymore this year.

7 Could you also report to the appropriate party that the yellow flashing warning lites outside the south end of the EEBA bldg by rollup door # 3 are not working.

Thanks, Frank

Paul J. Sparrow

Facility Manager Specialist
Collider-Accelerator Department
Bldg 911A - Room A137
Phone: (631) 344-4689
Fax: (631) 344-6121
e-mail: sparrow@bnl.gov
Pager: Voice - 0381

From: Lessard, Edward T
Sent: Monday, February 02, 2004 11:08 AM
To: Piper, Arthur J
Cc: Sparrow, Paul J
Subject: RE: Broken Glasses

Follow Up Flag: Follow up
Due By: Tuesday, March 23, 2004 12:00 AM
Flag Status: Flagged

Hi Artie:

Please make sure this topic and these emails go into the next minutes of the WOSH Committee.

Thanks.

Ed

-----Original Message-----
From: Piper, Arthur J
Sent: Wednesday, January 21, 2004 9:42 AM
To: Lessard, Edward T; Karol, Raymond C
Subject: FW: Broken Glasses

-----Original Message-----
From: Labas, Joseph
Sent: Tuesday, January 13, 2004 9:37 AM
To: Piper, Arthur J
Cc: Lebel, Roy H; Savage, Richard
Subject: FW: Broken Glasses

Art,

Following up on my voice-mail, here is the documented results of the analysis/testing performed by AO Safety on the pair of safety glasses (with glass lenses) that chipped when dropped here at BNL.

As you can see, the "good" lens passed the impact resistance (drop ball) test twice (once at the original final test after manufacturing and once again today). This should provide evidence that the glasses met the ANSI Z87.1 standard.

Additionally, I plan to follow up on some issues regarding the use of glass vs.

polycarbonate. During discussions with AO Safety it was strongly recommended we switch over to polycarbonate for various reasons including better impact resistance, lighter weight and improved durability (resistance to scratches, digs, pits etc.)

If you have any questions or concerns please contact me.

Joe Labas
Project Engineer - PPM/QP&SO
Brookhaven National Laboratory
631-344-3137
labas@bnl.gov

-----Original Message-----
From: DAVID SCHUBACH [mailto:david_schubach@aearo.com]
Sent: Tuesday, January 13, 2004 8:56 AM
To: Labas, Joseph
Cc: JOHN SALCE
Subject: Broken Glasses

Dear Joe,

The good lens has been tested and the results are as follows:

- The monogram is visible and properly marked
- The minimum thickness exceeds 3mm's
- The lens has been properly chemically treated.
- The lens was drop ball tested at time of manufacturing as well as this morning.

The lens passed the drop ball test both times.
Please do not hesitate to call me with any further questions.

Thanks
David

David Schubach
AOSafety Prescription Eyewear
Marketing Manager
5457 West 79th Street
Indianapolis, IN 46268
david_schubach@aearo.com
Tel: 317.692.6573
Fax: 317.692.6604

Occupational Safety & Health (OSH)

OSH Targets and Objectives

Collider-Accelerator Department
2004

OSH Management System Objectives

- An injury free workplace
- Compliance with OSH requirements in SBMS
- Workers consulted and encouraged to participate in OSH Management System
- Improved performance of OSH Management System
- OSH Management System is integrated with the EMS Management System
- Move towards 3rd party registration of OSH Management System*
- Maintain staff training > 95% complete
- Closeout WOSH Committee issues in a timely manner consistent with issue's risk
- Close out Tier 1 findings in a timely manner consistent with the finding's risk
- Meet BNL requirements on closure of OSHA findings

* OHSAS 18001 Registration

OSH Management System Targets

- Maintain C-AD LWCR < 0.8
- Reduce number of first aid cases by 10% from FY03 number
- Minimize findings in QA Assessments of OSH topics
- Define the OSH requirements for procured items
- Coach F&O Directorate Engineering in their roll-out of 18001-type OSH MS
- Complete the Job Risk Analyses (JRA) for the C-AD JRA Bank
- Be prepared for 3rd party registration by 9/04
- Get Tier 1 Committee trained on OSHA regulations
- Begin to get Building Managers trained in OHSA regulations
- Close out WOSH issues within 90 days, track in family ATS
- Close out Tier 1 issues within designated times, track in family ATS
- Implement corrective actions in C-AD Report of Electrical Ad Hoc Committee
- Implement corrective actions in C-AD Report on Improving Tier 1 Reviews
- Implement corrective actions in C-AD Report on Enhancing Electrical Work Practices

Job Risk Analyses Strategy – Baseline

Detailed Jobs	Description	Priority	Reason
Transportation	Vehicle use for moving materials within and interfacing with C-AD property	High	Recent dropped load from flatbed truck.
Material handling-machinery	Cranes, forklifts, etc.	High	Recent forklift dropped load.
Material handling-manual	Human lifting	Medium	Back injuries have occurred.
Electrical work- routine	<600 V	Medium	Hazard is experienced daily by many workers. Controls have been effective.
Electrical work-high energy	>600 V	Medium	Hazard is experienced daily by many workers. Controls have been effective.
Electrical working hot	Working on energized equipment	Medium	High consequences. Controls have been effective.
Radiation/contamination work	Work in posted areas	Low	Compliance issue. Very detailed controls in place and significant oversight.
Work with lasers	Lasers at C-AD facilities	Medium	Recent injury at Chemistry but external review of BNL laser safety recently completed.
Pressurized system work	Liquid and gas systems	Medium	Hazard is experienced daily by many workers. Controls have been effective. Cryogenic personnel responded to a few pressure boundary leaks in the last few years.
Vacuum system work	Beam lines and vacuum system equipment	Low	No recent injuries.
Biological/animal work	NSRL or Building 912	Low	In one facility and good controls in place.
Cable pulling	Various locations	High	Done a few times per year by many workers with varying experience. Injuries have occurred in the past.

Job Risk Analyses Strategy – Baseline

Detailed Jobs	Description	Priority	Reason
Operations	MCR, CAS, Siemens, Cryogenics, Tandem	Low	No recent injuries.
Emergency response	LEC, DEC and emergency forces	Low	No recent injuries.
Waste handling	Radioactive, hazardous, industrial wastes	Low	No recent injuries.
Work with hazardous materials	Be, lead, chemicals, etc.	Low	No recent injuries.
Adding cooling tower chemicals	Adding water treatment chemicals	Medium	A Water Group technician inhaled water chemical vapors in the last year that caused concern. No recent injuries. CMS in place.
Hi-pot testing	Various locations	Medium	High consequences and done frequently.
Tours	Various locations	Low	No injuries or perceived health issues. Good escort program in place.
Other to be determined	Identify other detailed jobs while doing area analysis	To be determined	Area analysis will likely discover complex that require detailed job analysis

Job Risk Analyses Form

Name(s) of Risk Team Members:	Point Value → Parameter ↓	1	2	3	4	5
Job Title: Job # or Job Identifier:	Frequency	<once/period	<once/week	<once/shift	>once/shift	All the time
Job Description: # of People on Job:	Likelihood	Impossible	Unlikely	Possible	Probable	Multiple
Date:	Severity	First Aid Only	Medical Treatment	Lost Time	Partial Disability	Death or Permanent Disability

		Before Risk Reduction					After Risk Reduction				
Step in Job	Hazard / Control(s)	Frequency x # people A	Likelihood B	Severity C	Total Risk* AxBxC	Controls Added to Reduce Risk	Frequency x # people A	Likelihood B	Severity C	Total Risk* AxBxC	% Risk Reduction

Further Description of Controls Added to Reduce Risk:

*Total Risk:	0 to 20	21 to 40	41-60	61 to 80	81 or greater
	Desirable	Low	Moderate	Substantial	Intolerable

Example JRA

Name(s) of Risk Team Members: E. Lessard, R. Karol, J. Scott and M. Van Essendelft	Point Value → Parameter ↓	1	2	3	4	5
Job Title: Dis-assembly of Beam-line Storage Area (Infrequent Job) Job # or Job Identifier: Job001	Frequency	<once/period	<once/week	<once/shift	>once/shift	All the time
Job Description: Remove radioactive beam line components stored in Building 912 and take them to another High Radiation Area. # of People on Job: 1 HEMO, 2 riggers, 2 RCTs, 1 Waste Tech, 1 Supervisor	Likelihood	Impossible	Unlikely	Possible	Probable	Multiple
Date: 3/04/04	Severity	First Aid Only	Medical Treatment	Lost Time	Partial Disability	Death or Permanent Disability

		Before Risk Reduction					After Risk Reduction				
Step in Job	Hazard / Control(s)	Frequency x # people A	Likelihood B	Severity C	Total Risk* AxBxC	Controls Added to Reduce Risk	Frequency x # people A	Likelihood B	Severity C	Total Risk* AxBxC	% Risk Reduction
Set up area, don PCs, climb over 20-foot walls	Radiation / Trained RCTs, RWPs	1 x 4	2	1	8	None					
"	Trip and slips while standing and donning or doffing protective clothing / none	1 x 4	2	4	32	Chair or bench	1 x 4	1	4	16	50%
"	Working at heights / OSHA compliant ladders	1 x 5	3	5	75	Fall Protection	1 x 5	2	5	50	33%
Install Herculite sheets outside storage area	Working at heights / OSHA compliant ladders	1 x 2	3	5	30	Fall Protection	1 x 2	2	5	20	33%
Rig out items	Dropped loads / Trained riggers and HEMO, inspect crane, inspect rigging equipment	1 x 3	2	5	30	None					
Load truck	Dropped loads / Trained riggers and HEMO, inspect crane, inspect rigging equipment	1 x 3	2	5	30	None					
Transport load	Load shifts and falls or accident / Trained driver, speed restricted to 5 mph	1 x 1	3	2	6	None					
Rig in items at new storage area	Dropped loads / Trained riggers and HEMO, inspect crane, inspect straps and rigging equipment	1 x 3	2	5	30	None					

Further Description of Controls Added to Reduce Risk: Ladders were observed to be used incorrectly in that they did not extend high enough above the shield wall to get on or off safely. Additionally, workers were observed to walk on the edge of the shield wall and on the edge of a steel plate. Since the Total Risk for step 3 is 75 (substantial), a written remedial action plan to reduce the risk is required.

*Total Risk:	0 to 20	21 to 40	41-60	61 to 80	81 or greater
	Desirable	Low	Moderate	Substantial	Intolerable

Typical Stressors in the Workplace

Environmental Stressors	
Air Temperature	Dust
Humidity	Emergency Lighting
Lighting	Odor
Moisture	Oxygen Deficiency
Over Pressure / Negative Pressure	Temperature / Humidity Variation
Ventilation / Air Speed	Working Alone
Physical Stressors	
Lack of Breaks	Length of Work Day
Time Pressure	Monotony
Qualifications of Co-Workers	
Social Stressors and Issues	
Availability of Eyewashes and Showers	Availability of Changing Rooms
Responsibility for First Aid	Availability of Drinking Water
Availability of Responsible Leader	Availability of Washing Facilities
Availability of Separate Eating Facilities	Protection of Non-Smokers
Availability of Toilets	Working Atmosphere

WOSH Committee Responsibilities

- Recommend new jobs to be added to list
- Identify which jobs apply to your Group
- Notify ESHQ Division if a listed job is to be performed - Contact R. Karol
- Ray will assign an OSH Team or OSH Team Member to assist you with risk analyses
- All jobs on the list are to be assessed by August 1, 2004